

WHAT IS CLAIMED IS:

1. An active type of light emission drive circuit, comprising:  
a switching element which turns on in response to an ON command pulse to pass a data signal therethrough;

a capacitive element which holds said data signal passed through said switching element during the ON state of said switching element; and

a drive element which supplies a forward drive current to an organic electroluminescence element in response to said data signal held in said capacitive element to cause said organic electroluminescence element to emit light, wherein

said switching element is a switching diode element which turns on by a potential difference between said ON command pulse and said data signal when said ON command pulse is supplied.

2. The light emission drive circuit according to claim 1, wherein one end of said capacitive element is supplied with said ON command pulse,

one end of said diode element is supplied with said data signal and the other end of said diode element is connected to the other end of said capacitive element, and

when said diode element changes from the ON state to an OFF states, a potential at a connection point between said capacitive element and said diode element varies by a value of an amplitude of said ON command pulse, and said drive element turns on in response to a potential at said connection point during the ON state of said switching element, thereby supplying said drive current to said organic electroluminescence element.

3. The light emission drive circuit according to claim 1, wherein said diode element is an organic diode element.

4. The light emission drive circuit according to claim 2, further comprising a reset circuit which supplies a reset pulse to said connection point immediately before said ON command pulse is generated, thereby changing the potential at said connection point to a first predetermined potential.

5. The light emission drive circuit according to claim 4, wherein said reset circuit comprises a diode element.

6. The light emission drive circuit according to claim 2, further comprising a crosstalk suppressor circuit which is inserted between said capacitive element and said switching diode element, and which cuts a connection between said capacitive element and said switching diode element during the OFF state of said switching diode element.

7. The light emission drive circuit according to claim 6, wherein said crosstalk suppressor circuit includes:

a first diode element inserted in the same direction of polarity as that of said switching diode element between said capacitive element and said switching diode element; and

a second diode element which has one end connected to a connection point between said switching diode element and said first diode element, and becomes an ON state during the OFF state of said switching diode element, thereby providing a second predetermined potential to the connection point between said switching diode element and said first diode element to allow said first diode element to be in an OFF state.

8. The light emission drive circuit according to claim 7, wherein the other end of said second diode element is connected to a line along with the one end of said capacitive element.

9. A display device comprising:

a display panel having a plurality of data lines, a plurality of scan lines intersecting with said plurality of data lines, and a plurality of sets each of which has an organic electroluminescence element and an active type of light emission drive circuit, the sets being disposed at the respective intersections of said plurality of data lines and said plurality of scan lines; and

a controller which supplies a scan pulse in sequence at predetermined time intervals to one scan line of said plurality of scan lines and supplies a data signal to at least one data line of said plurality of data lines to allow an organic electroluminescence element located at an intersecting portion of said one data line and said at least one data line to emit light, wherein

said light emission drive circuit includes:

a switching diode element which turns on by a potential difference between said scan pulse and said data signal when said scan pulse is supplied through said one scan line;

a capacitive element which holds said data signal passed through said diode element while said diode element is in the ON state; and

a drive element which supplies a forward drive current to said organic electroluminescence element in response to said

data signal held in said capacitive element to cause said organic electroluminescence element to emit light.

10. The display device according to claim 9, wherein

one end of said capacitive element is supplied with said scan pulse,

one end of said switching diode element is supplied with said data signal and the other end of said switching diode element is connected to the other end of said capacitive element, and

when said switching diode element changes from the ON state to an OFF state, a potential at a connection point between said capacitive element and said first diode element varies by a value of an amplitude of said scan pulse, and said drive element turns on in response to a potential at said connection point during the ON state of said switching element, thereby supplying said drive current to said organic electroluminescence element.

11. The display device according to claim 9, wherein said switching diode element is an organic diode element.

12. The display device according to claim 10, further comprising a reset circuit which supplies a reset pulse to said connection point immediately before said scan pulse is generated, thereby changing the potential at said connection point to a first predetermined potential.

13. The display device according to claim 12, wherein said reset circuit includes a diode element.

14. The display device according to claim 12, wherein said reset pulse is said scan pulse provided during a preceding scan.

15. The display device according to claim 10, further comprising

a crosstalk suppressor circuit which is inserted between said capacitive element and said switching diode element, and which cuts a connection between said capacitive element and said switching diode element during the OFF state of said switching diode element.

16. The display device according to claim 15, wherein said crosstalk suppressor circuit includes:

a first diode element inserted in the same direction of polarity as that of said switching diode element between said capacitive element and said switching diode element; and

a second diode element which has one end connected to a connection point between said switching diode element and said first diode element, and becomes an ON state during the OFF state of said switching diode element, thereby providing a second predetermined potential to the connection point between said switching diode element and said first diode element to allow said first diode element to be in an OFF state.

17. The display device according to claim 16, wherein the other end of said second diode element is connected to a line along with the one end of said capacitive element.